National Canners Association

WASHINGTON, D. C.

Information Letter

For N. C. A. Members

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Occasional Discoloration of Canned Corn.

The tarnish which develops on copper surfaces and on surfaces of alloys containing copper, such as brass, is more soluble in corn (salted according to the usual practice) than is bright copper.

Whenever a cooker filler has been out of use for as much as two or three days, the surface of the bowl (if it is not tinned), and the surface of the valves develop a slight amount of this tarnish, and the first corn passing through takes up enough copper to cause discoloration after processing. This discoloration is general, and intimately mixed with the corn in all portions of the can, and thus is to be sharply distinguished from the iron sulfide discoloration which occurs only in the air space above the corn.

Copper sulfide discoloration always occurs in the first run of the season, and is familiar to every canner. Research Laboratory Bulletin No. 6, published in 1915, calls attention to the fact that it also occurs during the season when the use of a line has been discontinued for several days.

An instance of copper sulfide discoloration was brought to the Laboratory's attention recently, in connection with a filler which was used only at intervals of several days, and while this type of discoloration is rather unusual, the following suggestions are made for the benefit of those who encounter it.

As a means of cleaning the copper or brass surfaces, whenever a line is started after a period of idleness, the cooker should be filled with a heavily salted mash of bran and water. The mash is cooked without stirring, and run through the filler. The bran is then washed out thoroughly and the cooker is ready for use.

A Caution With Respect to Can-Marking Inks.

From time to time the Research Laboratory has encountered samples of foods containing a medicinal flavor resembling phenol (carbolic acid). This has been traced in some instances to the can-marking inks containing phenol.

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Five samples of inks that were being used by canners were examined in the Laboratory for phenol. Three of them contained no phenol, while one of them contained 32 per cent of phenol and the other 70 per cent.

In one instance of phenolic flavor in fruits the cans had been marked on the side before entering the exhaust box. In the exhaust box the heat vaporized the phenol in the ink and the vapors thus contaminated the contents of the cans. In another instance the can ends were stamped and stacked on top of each other. Even though the ink does not touch the lower surface of the cover when ends are thus stacked, enough of the phenol vapor condenses on it to give this phenolic flavor to some foods.

When ink containing phenol is used the cans should be marked only after they are closed.

Sweet Corn, Green Peas, and Tomato Estimates.

The Bureau of Agricultural Economics has issued revised estimates, as of September 1, of the production of sweet corn, green peas, and tomatoes for canning.

The area in sweet corn is estimated at 299,300 acres, as compared with 250,850 in 1923, and the indicated yield is 2 tons per acre, forecasting a total crop this year of 587,700 tons compared with 590,400 last year.

The green pea acreage this year is placed at 214,960 acres, as compared with 189,310 acres last year, the indicated yield at ½ ton per acre, and the total yield at 216,300 tons, compared with 159,900 in 1923.

The tomato acreage is estimated at 312,000 acres, with an indicated yield of 3.9 tons per acre, forecasting a total production of 1,206,900 tons. In 1923, the reported acreage was 290,580 and the yield 1,233,000 tons.

Italian Canned Food Marking Regulations.

All tins containing preserved meat or fish must show the name and net weight of the product and the name of the producer in a clear and indelible manner, in order to be permitted entry into Italy, according to a Ministerial Decree made effective on July 1, 1924. This decree was promulgated January 1, 1923, and was published by the Department of Commerce the following month. Italian importers sought to obtain further delay in the application of this regulation, but the Ministry of the Interior refused on the grounds that a year and a half was considered sufficiently long for business to adjust itself to the new requirements. However, in exceptional cases, importing firms may stamp the tins with the initials of the producing house instead of the full name, provided such initials have been registered with the appropriate government office at Rome and the veterinary officers at the ports notified. Canned fruits and vegetables were also included in the original decree, but enforcement as to them was postponed until December 31, 1924.

Greece Fixes Olive Retention.

The retention of olives has been fixed by a ministerial decree at 25 per cent independent of their quality, American Trade Commissioner Dickerson, Athens, informs the Department of Commerce. Large stocks, which at present are warehoused in Greece, and a new crop which, according to authoritative information will be large, are given by the Cabinet of Ministers as the reason for this decree.

Caviar a Popular Food Item in Greece.

Official statistics show that Greece imports about 115 metric tons of caviar annually of which about one-tenth comes from the United States. The great volume of this expensive commodity comes from Russia, either directly or through Constantinople. Orders are generally booked with the Soviet export organization at Constantinople. Greece herself produces an important quantity of a light-colored caviar known as "boutargue". Most of the domestic production, estimated at between 50 and 100 metric tons, is consumed locally.

Commercial Canning and Vitamines.

In the Journal of Home Economics for September, under the title "Commercial Canning and Destruction of Vitamines", Dr. Walter H. Eddy describes briefly the results of work done during the last two years in cooperation with Dr. E. F. Kohman of the Research Laboratory of the National Canners Association. In summing up the efforts to find out the truth about the destruction of Vitamin C in commercial canning processes, Dr. Eddy states:

> "We are now able to show that the sealing of canned goods in cans prior to heating (processing) brings about a protection against heat destruction which is of appreciable magnitude. From our experiments we have drawn the conclusions that the principal destructive agent in the case of vitamin C is oxidation and that if oxidation is prevented we may subject food material to a relatively high temperature for some time without serious destruction to the vitamin. We shall also show that the oxidizing factor is not always the presence of atmospheric oxygen and that in the canning of apples, for example, it is possible, by so simple an expedient as soaking in 2 per cent brine before canning, to accomplish three things: First, prevention of discoloration, second, prevention of can perforation, and third, the prevention of vitamin C destruction. In other words, the method of preparation and of canning has a direct bearing on the nutritive value of the canned product and the findings for commercial purposes obviously have a direct bearing on home canning methods.
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> "We also studied the value of canned spinach as a source of vitamins and demonstrated the potency of very small amounts of this material even though processed at 240°F for two hours. Under those conditions we have found that one gram daily is perfectly protective against scurvy in the guinea pig and that as small an amount as 26 milligrams daily is an adequate source of vitamin A for white rats."

United States Navy in Market for canned Pumpkin.

The Bureau of Supplies and Accounts has issued Schedule 2668, asking for bids on 354,000 pounds of canned pumpkin for delivery not later than December 15. The bids will be opened at 10 a.m., October 7, 1924. Canners interested should write the Bureau of Supplies and Accounts, U. S. Navy, Washington, D. C., for Schedule 2668.

Labeling Canned Field Corn.

The Association has received a number of enquiries from canners regarding the application of the Food and Drugs Act to canned field corn and we are pleased to quote the following received today from the Bureau of Chemistry:

"You asked regarding the application of the food and drugs act to canned field corn.

"The product which is universally canned and sold as canned corn is sugar corn. The purchaser who buys a can labeled as "Corn" unquestionably expects to get sugar corn and would undoubtedly be deceived if he received instead a can of field corn. Several years ago the Bureau made a number of seizures of canned field corn, alleging the product to be both adulterated and misbranded in that it was falsely represented as sugar corn when in fact field corn had been substituted for the article. A contest ensued in the case of one of these seizures resulting in a verdict for the Government; whereupon the remaining actions were terminated without contest. The Bureau will unhesitatingly recommend similar action against canned field corn packed during the present season and labeled as "Corn" or "Sugar Corn". The only conditions under which canned field corn could be sold without objection would be under a label unequivocally designating it as field corn with an additional statement clearly indicating that the product is not sugar corn and with a further plain statement of the addition of sugar, if sugar is added in the preparation of the product.

Very truly yours,

Acting Chief. "

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